


Liquid crystal display devices capable of improved dot-inversion driving and methods of operation thereof

Patent number: US6160535
Publication date: 2000-12-12
Inventor: PARK JIN-HO (KR)
Applicant: SAMSUNG ELECTRONICS CO LTD (KR)
Classification:
- international: G09G3/36; G02F1/1343
- european: G09G3/36B; G09G3/36C2; G09G3/36C8
Application number: US19980008396 19980116
Priority number(s): KR19970024848 19970616

Also published as:

 KR242443 (B1)**Abstract of US6160535**

An LCD panel includes a plurality of parallel gate lines and a plurality of parallel data lines on a substrate, the data lines extending transverse to the gate lines. The plurality of data lines cross the plurality of gate lines to define a plurality of pixel regions, the plurality of pixel regions being arranged in a matrix of rows and columns. A plurality of pixel electrodes is disposed on the substrate, a respective one of the pixel electrodes being disposed on a respective one of the pixel regions and electrically connected, for example, by a thin-film transistor (TFT), to a data line such that the pixel electrodes on a column of pixel regions are alternately connected to one of first and second data lines disposed on opposite sides of the column. According to another embodiment, an LCD device includes an LCD panel as described above, coupled to a controller that is responsive to a video signal including a plurality of sequences of video values, e.g., a standard color video signal including a plurality of red, green and blue color values. A respective one of the sequences of video values representing pixels of a respective frame to be displayed during a respective frame period. The controller is configured to drive a data line of the LCD panel during a frame period with plurality of data line voltages that have the same polarity, to thereby operate the LCD panel in a dot inversion fashion. Preferably, the controller is configured to drive a data line with a plurality of data line voltages having a first polarity during a first frame period and with a second plurality of data line voltages having a second polarity during a second frame period.

Data supplied from the esp@cenet database - Worldwide**BEST AVAILABLE COPY**